

CONTENTS

CHAPTER 1 - INTRODUCTION

1-1 PURPOSE

1-2 SCOPE

1-3 DEFINITION OF ROTORCRAFT AND LIGHT AIRCRAFT

1-3.1 ROTORCRAFT

1-3.2 AIRCRAFT

1-4 INTENDED AUDIENCE

1-5 AIRCRAFT AND ROTORCRAFT QUALIFICATION

1-5.1 PURPOSE

1-5.1.1 AIRWORTHINESS QUALIFICATION

1-5.1.2 SPECIFICATION COMPLIANCE

1-5.1.3 MILITARY QUALIFICATION

1-5.1.4 FIRST ARTICLE

1-5.1.5 FLIGHT SAFETY PARTS QUALIFICATION

1-5.1.6 STRUCTURAL INTEGRITY

1-5.2 SCOPE

1-5.2.1 AIRWORTHINESS QUALIFICATION

1-5.2.2 SPECIFICATION COMPLIANCE

1-5.2.3 MILITARY QUALIFICATION

1-5.2.4 FIRST ARTICLE

1-5.2.5 FLIGHT SAFETY PARTS QUALIFICATION

1-5.2.6 STRUCTURAL INTEGRITY

1-5.3 GENERAL TECHNIQUES

1-5.3.1 TESTING

1-5.3.2 ANALYSIS

1-5.3.3 MODELING

1-5.3.4 SIMILARITY

1-5.4 DEVELOPMENT TECHNIQUES

1-5.5 SUSTAINMENT TECHNIQUES

1-6 QUALIFICATION ITEMS, TIMING, AND OBJECTIVES

1-6.1 INTRODUCTION

1-6.1.1 CONCEPT EXPLORATION AND DEFINITION (PHASE 0)

1-6.1.2 DEMONSTRATION AND VALIDATION (PHASE I)

1-6.1.3 ENGINEERING AND MANUFACTURING DEVELOPMENT (PHASE II)

1-6.1.4 PRODUCTION AND DEPLOYMENT (PHASE III)

1-6.1.5 OPERATIONS AND SUPPORT (PHASE IV)

1-6.2 NEW SYSTEM

1-6.2.1 ITEMS

1-6.2.2 TIMING

1-6.2.3 OBJECTIVES

1-6.3 MODIFICATION

1-6.3.1 ITEMS

1-6.3.2 TIMING

1-6.3.3 OBJECTIVES

1-7 SOURCE QUALIFICATION

1-7.1 QUALIFIED PARTS LISTS (QPL)

1-7.2 SOURCE CONTROLLED ITEMS

1-7.3 SPECIFICATION CONTROL ITEMS

1-7.4 ALTERNATE SOURCES

1-8 USE AS TEXTBOOK, REFERENCE, AND PREPARATION GUIDE

CHAPTER 2 - AIRWORTHINESS QUALIFICATION PROGRAM

2-1 INTRODUCTION

2-2 AIRWORTHINESS QUALIFICATION PLAN (AQP)

2-3 AIRWORTHINESS QUALIFICATION SPECIFICATION (AQS)

2-4 SURVEY VERSUS DEMONSTRATION TEST REQUIREMENTS

2-4.1 SURVEYS

2-4.1.1 SIMPLE SURVEY

2-4.1.2 VERIFICATION AND EFFECT

2-4.1.3 SURVEY FOR ANALYSIS

2-4.2 DEMONSTRATIONS

2-4.2.1 TESTING

2-4.2.2 ACTION

2-4.2.3 ANALYTICAL

2-5 AIRWORTHINESS QUALIFICATION PROGRAM -
TEST MANAGEMENT

2-5.1 PLANNING

2-5.2 TEST INTEGRATION AND COMPUTER RESOURCES
WORKING GROUPS

2-5.2.1 TEST INTEGRATION WORKING GROUP

2-5.2.2 COMPUTER RESOURCES WORKING GROUP

2-5.3 TEST COORDINATOR

2-5.4 GOVERNMENT PLANT ACTIVITY

2-5.5 TEST VERSUS SPECIFICATION MATRICES

2-5.6 CONTRACTOR FLIGHT RELEASES

2-5.7 AIRWORTHINESS RELEASES

2-6 REQUIREMENTS TAILORING

2-6.1 GENERAL PHILOSOPHY

2-6.2 CONSIDERATIONS

2-6.2.1 TECHNICAL RELEVANCE

2-6.2.2 ASSESSMENT OF RISK

2-6.2.3 RESOURCES

2-7 OTHER AIRWORTHINESS CRITERIA ADOPTION

2-7.1 CIVIL AGENCIES

2-7.2 MILITARY

2-7.3 FOREIGN

2-8 AIRWORTHINESS QUALIFICATION SUBSTANTIATION
REPORT (AQSR)

2-8.1 VOLUME I - AIRWORTHINESS QUALIFICATION
FINAL REPORT

2-8.2 VOLUME II - SPECIFICATION COMPLIANCE BY
PARAGRAPH

2-8.3 STATEMENT OF AIRWORTHINESS QUALIFICATION
(SAQ)

CHAPTER 3 - SYSTEM SAFETY

3-1 INTRODUCTION

3-2 OBJECTIVES

3-3 SYSTEM SAFETY PROCESS

3-3.1 KNOWN PRECEDENT (BLOCK A, FIGURE 3-2)

3-3.2 SYSTEM DELINEATION (BLOCK B)

3-3.3 IDENTIFICATION OF FLIGHT SAFETY PARTS (BLOCK C)

3-3.4 SYSTEM HAZARD ANALYSIS (BLOCK D)

3-3.5 HAZARD IDENTIFICATION (BLOCK E)

3-3.6 HAZARD CATEGORIZATION AND EVALUATION (BLOCK F)

3-3.7 ACTIONS TO ELIMINATE OR CONTROL HAZARDS (BLOCK G)

3-3.8 MODIFICATION OF SYSTEM ELEMENTS (BLOCK H)

3-3.9 EFFECTIVENESS EVALUATION OF ACTION TAKEN (BLOCK I)

3-3.10 ACCIDENT OR INCIDENT ANALYSIS (BLOCK J)

3-3.11 COMPONENT AND/OR SYSTEM TEST AND
DEMONSTRATION (BLOCK K)

3-3.12 INCREASED SAFETY ASSURANCE (BLOCK L)

3-3.13 AIRWORTHINESS QUALIFICATION (BLOCK M)

3-4 ANALYTICAL METHODOLOGIES AND TECHNIQUES

3-5 KNOWLEDGE OF HAZARDS

3-6 CLASSIFICATION OF HAZARDS

3-7 RESOLUTION OF HAZARDS

3-7.1 CONTROL METHODS

3-7.2 SUBSTANTIATION OF HAZARD RESOLUTION

3-8 SYSTEM SAFETY MANAGEMENT PLAN

3-8.1 PURPOSE

3-8.2 CONTENTS

3-9 SYSTEM SAFETY PROGRAM PLAN (SSPP)

3-9.1 PURPOSE

3-9.2 CONTENTS

3-10 SAFETY ANALYSES AND ANALYSIS TECHNIQUES

3-10.1 PRELIMINARY HAZARD ANALYSIS

3-10.2 SUBSYSTEM HAZARD ANALYSIS

3-10.3 SYSTEM HAZARD ANALYSIS

3-10.4 OPERATION AND SUPPORT HAZARD ANALYSIS

3-11 SAFETY CONSIDERATIONS IN NEW TECHNOLOGY

3-12 SAFETY TESTS

3-13 FLIGHT SAFETY PARTS (FSP) PROGRAM

3-13.1 IDENTIFICATION OF FLIGHT SAFETY PARTS

3-13.2 FLIGHT SAFETY PARTS QUALIFICATION

3-13.3 FLIGHT SAFETY PARTS RECORDS

3-13.4 FLIGHT SAFETY PARTS SURVEILLANCE

3-13.5 FLIGHT SAFETY PARTS DISPOSITION

CHAPTER 4 - TECHNICAL REVIEWS, DATA, AND
DOCUMENTATION

INTRODUCTION

4-2 CONTRACT DATA

4-2.1 REQUIREMENTS

4-2.2 DATA ITEM DESCRIPTIONS

4-2.3 CONTRACT DATA REQUIREMENTS LIST (CDRL)

4-3 CLASSIFIED AND CONTROLLED DATA

4-3.1 CLASSIFIED DATA

4-3.1.1 ARMY REQUIREMENTS

4-3.1.2 INDUSTRIAL REQUIREMENTS

4-3.2 CONTROLLED DATA

4-4 APPLICABLE DOCUMENTS

4-5 PROGRAM PLANS

4-6 TECHNICAL REVIEWS AND AUDITS

4-6.1 PROGRAM PROGRESS REVIEWS

4-6.2 PRELIMINARY DESIGN REVIEWS

4-6.3 CRITICAL DESIGN REVIEWS

4-6.4 FLIGHT READINESS REVIEWS

4-6.5 FIRING READINESS REVIEWS

4-6.6 SPECIAL TECHNICAL REVIEWS

4-6.7 SOFTWARE REVIEWS

4-6.8 CONFIGURATION AUDITS

4-6.9 INTEGRATED PRODUCT TEAM (IPT) REVIEWS

4-7 COMPONENT DESIGN AND QUALIFICATION DATA

4-7.1 STANDARD AND QUALIFIED PARTS DATA

4-7.2 STRUCTURAL COMPONENT DATA

4-7.3 ENGINE AND DRIVE TRAIN COMPONENT DATA

4-7.4 HYDRAULIC-PNEUMATIC-FUEL SYSTEMS COMPONENTS
DATA

4-7.5 ELECTRONIC COMPONENTS DATA

4-7.6 OPTICAL COMPONENTS DATA

4-7.7 FLIGHT SAFETY PARTS DATA

4-7.8 MATERIALS DATA

4-8 SUBSYSTEM DESIGN AND QUALIFICATION DATA

4-8.1 ENGINE TRANSMISSION, AND DRIVE SUBSYSTEMS

4-8.2 FUEL AND OIL SUBSYSTEMS

4-8.3 ROTOR, PROPELLER, AND PROPROTOR SUBSYSTEMS

4-8.4 HYDRAULIC AND PNEUMATIC SUBSYSTEMS

- 4-8.5 LANDING GEAR
- 4-8.6 ELECTRICAL SUBSYSTEMS
- 4-8.7 AVIONICS SUBSYSTEMS
- 4-8.8 CREWSTATIONS DISPLAYS AND CONTROLS
- 4-8.9 CREWSTATIONS
- 4-8.10 PASSENGER FURNISHING
- 4-8.11 HOISTS
- 4-8.12 CARGO PROVISIONS
- 4-8.13 LAVATORIES AND GALLEYS
- 4-8.14 TARGETING, ARMAMENT, AND FIRE CONTROL
- 4-8.15 SOFTWARE DATA
- 4-9 SYSTEM DESIGN AND QUALIFICATION DATA
 - 4-9.1 CHARACTERISTIC AND PERFORMANCE DATA
 - 4-9.2 STRUCTURAL DATA
 - 4-9.3 PROPULSION AND POWER TRAIN DATA
 - 4-9.4 FATIGUE LIFE DATA
 - 4-9.5 AERODYNAMIC PROPERTIES
 - 4-9.6 WEIGHT AND BALANCE DATA
 - 4-9.7 SYSTEM VIBRATION DATA
 - 4-9.8 ACOUSTICAL NOISE DATA
 - 4-9.9 CLIMATIC DATA
 - 4-9.10 ICING DATA
 - 4-9.11 ELECTROMAGNETIC ENVIRONMENTAL EFFECTS DATA
 - 4-9.12 WEAPON SYSTEM DATA
 - 4-9.13 EXTERNAL STORES DATA
 - 4-9.14 SURVIVABILITY
 - 4-9.15 ENGINE AND FLIGHT CONTROL ELECTRONICS DATA
 - 4-9.16 SYSTEM ENDURANCE DATA
 - 4-9.17 SYSTEM SAFETY DATA
 - 4-9.18 INTERFACE CONTROL DOCUMENTS
 - 4-9.19 MISCELLANEOUS
- 4-10 GENERAL QUALIFICATION ASSURANCE AND OPERATIONAL READINESS DATA
 - 4-10.1 GENERAL QUALIFICATION ASSURANCE
 - 4-10.2 TESTABILITY, STANDARDIZATION, AND PRODUCIBILITY
 - 4-10.3 RELIABILITY AND RELATED DATA
 - 4-10.4 TRAINING AND TRAINERS
 - 4-10.5 TRANSPORT DATA
 - 4-10.6 MANPRINT DATA
 - 4-10.6.1 MANPOWER
 - 4-10.6.2 PERSONNEL
 - 4-10.6.3 TRAINING
 - 4-10.6.4 HUMAN FACTORS
 - 4-10.6.5 SYSTEM SAFETY

4-10.6.6 HEALTH HAZARDS

4-10.7 LOGISTICS

4-10.8 BATTLE DAMAGE, CORROSION, AND
INTEROPERABILITY

4-10.9 SHIP COMPATIBILITY

4-11 TECHNICAL DATA PACKAGE (TDP)

4-11.1 ENGINEERING DRAWINGS AND ASSOCIATED LISTS

4-11.2 PERFORMANCE SPECIFICATIONS

4-11.3 MANUFACTURING AND PROCESS SPECIFICATIONS

4-11.4 TOOLING DRAWINGS

4-12 DATA MANAGEMENT

4-12.1 TAILORING DATA REQUIREMENTS

4-12.2 REPORTS AND DATA

4-12.3 DATA SUBMITTAL

4-12.4 RECORDS AND MANUALS

4-13 CONFIGURATION MANAGEMENT

4-13.1 FUNCTIONAL BASELINE

4-13.2 ALLOCATED BASELINE

4-13.3 ALLOCATED BASELINE EXPANSION

4-13.4 PRODUCT BASELINE

4-14 GOVERNMENT-INDUSTRY DATA EXCHANGE PROGRAM
(GIDEP)

4-15 LESSONS LEARNED

4-15.1 THE SAFETY DATABASE

4-15.2 THE COMBAT DATABASE

4-15.3 THE LOGISTIC DATABASE

CHAPTER 5 - QUALIFICATION ASSURANCE

5-1 INTRODUCTION

5-2 HARDWARE QUALITY ASSURANCE PROGRAM

5-2.1 QUALITY ASSURANCE PROGRAM ELEMENTS

5-2.2 QUALITY ASSURANCE PROGRAM INCORPORATION

5-3 SOFTWARE QUALITY ASSURANCE PROGRAM

5-3.1 SOFTWARE QUALITY ASSURANCE PROGRAM ELEMENTS

5-3.2 SOFTWARE QUALITY ASSURANCE PROGRAM
INCORPORATION

5-4 INSTRUMENTATION AND CALIBRATION FOR TESTING

5-4.1 INSTRUMENTATION PLANS AND REVIEWS

5-4.2 FLIGHT TEST INSTRUMENTATION

5-4.3 RANGE INSTRUMENTATION

5-4.4 CALIBRATION REQUIREMENTS

5-5 APPROVAL OF PLANS AND REPORTS

5-6 TEST WITNESSING

5-7 TEST FACILITY VALIDATION

5-8 SIMULATION VALIDATION

5-9 TESTABILITY

5-9.1 GENERAL TESTABILITY FEATURES

5-9.2 AUTOMATIC TEST EQUIPMENT (ATE)

5-9.3 SELF-DIAGNOSTICS AND BUILT IN TEST (BIT)

5-9.4 NON-DESTRUCTIVE TEST AND EVALUATION (NDTE)

5-10 TEST-ANALYZE-FIX-TEST (TAFT)

5-11 DEFENSE SPECIFICATIONS, STANDARDS, AND HANDBOOKS

5-11.1 SPECIFICATIONS

5-11.2 STANDARDS

5-11.3 HANDBOOKS

5-12 MAKE OR BUY PLAN

5-13 SPECIAL TOOLING

5-14 STANDARDIZATION PROGRAM

5-15 PRODUCIBILITY

CHAPTER 6 - MODELING

SECTION I - PHYSICAL MODELS

6-1 INTRODUCTION

6-2 AERODYNAMIC MODELS

6-2.1 AIRFOILS AND TWO-DIMENSIONAL AERODYNAMIC SHAPES

6-2.2 FLOW TANKS

6-2.3 WIND TUNNELS

6-2.4 FORCE MODELS

6-2.5 POWERED FORCE MODELS

6-2.5.1 AERO-INTERFERENCE MODELS

6-2.5.2 AEROELASTIC MODELS

6-2.6 PHYSICAL LAYOUT MOCK-UPS

6-3.1 ICING TUNNELS AND ICING MOCK-UPS

6-3 INERT GENERAL REDUCED SCALE MODEL

6-3.2 FUSELAGE MOCK-UP

6-3.3 CREWSTATIONS

6-3.3.1 CREWSTATION MOCK-UP

6-3.3.2 MODULAR RECONFIGURABLE CREWSTATION SIMULATOR 6-20

6-3.4 MISSION CREW, PASSENGER AND CARGO AREA

6-3.5 COMPUTER AIDED ENGINEERING SUBSTITUTION FOR MOCK-UPS

6-4 FUNCTIONAL SUBSYSTEM MOCK-UPS

6-4.1 ELECTRICAL SYSTEM

6-4.2 PRESSURE SYSTEMS

6-4.2.1 HYDRAULIC SYSTEM

6-4.2.2 HIGH PRESSURE PNEUMATIC SYSTEMS

6-4.2.3 LOW PRESSURE PNEUMATIC AND VACUUM SYSTEMS

6-4.3 ENGINES AND DRIVE TRAIN, FLUIDS, AND ACCESSORIES

6-4.4 ROTOR SYSTEM

6-4.4.1 MECHANICAL ROTOR AND CONTROLS

6-4.4.2 ROTOR AND ELECTRONIC CONTROLS

6-4.4.3 WHIRL TEST ARTICLE

6-4.5 ELECTRONIC SYSTEM MANAGER NETWORKS

6-4.5.1 GENERAL CONTROL AND DATA BUS NETWORKS

6-4.5.2 ELECTRONIC FLIGHT CONTROLS

6-4.5.3 INTEGRATED COCKPIT AVIONICS NETWORKS

6-4.5.4 ELECTRONIC ENGINE CONTROLS

6-4.6 TARGETING, FIRE CONTROL, ARMAMENT AND STORES STATIONS

6-4.7 LANDING GEAR

6-4.8 LIGHTING MOCK-UP

6-4.8.1 INTERIOR LIGHTING

6-4.8.2 EXTERIOR LIGHTING

6-5 GROUND TEST VEHICLE

6-6 MOCK-UP REVIEW AND APPROVAL

SECTION II - SIMULATIONS

6-7 INTRODUCTION

6-7.1 ABSTRACT EMULATION

6-7.2 PHYSICAL EMULATION

6-8 SIMULATION BASES AND VALIDATION CRITERIA

6-8.1 TABULAR DATA MODELS

6-8.2 CHARACTERISTIC FUNCTION MODELS

6-8.3 TRANSFER FUNCTION MODELS

6-8.4 STATISTICAL FUNCTION MODELS

6-8.4.1 STATISTICAL RESULTS

6-8.4.2 MONTE CARLO RESULTS

6-8.5 ARTIFICIAL INTELLIGENCE (AI) MODELS

6-8.6 NEURAL NETWORK MODELS

6-8.7 COMPOSITE AND HYBRID BASES

6-9 EMULATORS

6-9.1 INTRODUCTION

6-9.2 SYSTEM EQUIPMENT

6-9.3 ENVIRONMENTS

6-9.4 EVENTS

6-9.5 INTELLIGENCE

6-10 SIMULATORS

6-10.1 INTRODUCTION

6-10.2 MISSION EQUIPMENT

6-10.3 FLIGHT SIMULATORS

6-10.4 MISSION FLIGHT SIMULATORS

6-10.5 BATTLE ENGAGEMENT SIMULATORS

6-11 SIMULATIONS AS SOFTWARE ENVIRONMENTS

- 6-11.1 HOST
- 6-11.2 HOST ENVIRONMENT
- 6-11.3 SYSTEM ENVIRONMENT
- 6-11.4 EMBEDDED SIMULATIONS

CHAPTER 7 - COMPONENT QUALIFICATION

- 7-1 INTRODUCTION
- 7-2 QUALIFICATION REQUIREMENTS
 - 7-2.1 TYPES OF COMPONENTS
 - 7-2.2 TYPES OF TESTS
 - 7-2.3 COMPONENT QUALIFICATION MATRIX
- 7-3 QUALIFICATION PROCEDURES
 - 7-3.1 TEST SPECIMENS
 - 7-3.2 TEST PLANS
 - 7-3.3 QUALIFICATION REPORTS
 - 7-3.4 QUALIFICATION BY SIMILARITY
 - 7-3.5 SPECIAL PROCEDURES FOR FLIGHT SAFETY PARTS
- 7-4 PARTS CONTROL PROGRAM
- 7-5 FUNCTIONAL QUALIFICATION TESTS
 - 7-5.1 PURPOSE
 - 7-5.2 DETAILED REQUIREMENTS
- 7-6 STRUCTURAL QUALIFICATION TESTS
 - 7-6.1 STRUCTURAL INTEGRITY PROGRAM
 - 7-6.1.1 STRUCTURAL DESIGN
 - 7-6.1.2 FATIGUE INTEGRITY
 - 7-6.1.3 STRUCTURAL INTEGRITY VERIFICATION
 - 7-6.1.4 STRUCTURAL INTEGRITY MAINTENANCE
 - 7-6.2 STATIC LOADING
 - 7-6.3 FATIGUE LOADING
 - 7-6.4 COMPOSITE STRUCTURES
 - 7-6.5 CRASH RESISTANCE
- 7-7 FAA STRUCTURAL QUALIFICATION
 - 7-7.1 STRUCTURE
 - 7-7.2 DESIGN AND CONSTRUCTION
- 7-8 ENDURANCE AND SCREENING QUALIFICATION TESTS
 - 7-8.1 ENDURANCE TESTING
 - 7-8.2 SCREENING TESTS
- 7-9 GENERAL PHYSICAL ENVIRONMENTS
 - 7-9.1 VIBRATION
 - 7-9.2 TEMPERATURE
 - 7-9.3 ACCELERATION
 - 7-9.4 SHOCK
 - 7-9.5 SAND AND DUST
 - 7-9.6 GUNFIRE
 - 7-9.7 RAIN

7-9.8 HUMIDITY

7-9.9 FUNGUS

7-9.10 ICING

7-9.11 SOLAR RADIATION (SUNSHINE)

7-9.12 SALT FOG

7-9.13 EXPLOSIVE ATMOSPHERE

7-9.14 LEAKAGE (IMMERSION)

7-9.15 LOW PRESSURE (ALTITUDE)

7-9.16 TEMPERATURE, HUMIDITY, VIBRATION, ALTITUDE

7-10 ELECTROMAGNETIC ENVIRONMENTS

7-10.1 ELECTROMAGNETIC INTERFERENCE (EMI)

7-10.2 ELECTROSTATIC DISCHARGE (ESD)

7-10.3 NUCLEAR ELECTROMAGNETIC PULSE (NEMP)

7-10.4 LIGHTNING

7-10.5 TEMPEST

7-11 OPTICAL/ELECTRO-OPTICAL QUALIFICATION TESTS

7-11.1 TARGETING SYSTEMS

7-11.2 PILOTAGE SYSTEMS

7-12 SURVIVABILITY QUALIFICATION TESTS

7-12.1 BALLISTIC TESTS

7-12.2 DIRECTED ENERGY TESTS

7-12.3 NUCLEAR HARDENING TESTS

7-12.4 NBC TESTS

7-13 COMPONENT TEST-ANALYZE-FIX-TEST

7-14 MATERIAL QUALIFICATION

7-14.1 STRUCTURAL ALLOWABLES

7-14.2 ENVIRONMENTAL RESISTANCE

7-14.3 SPECIAL PROPERTIES

7-14.4 PROCESS DEFINITION AND CONTROL

7-15 PROCESS QUALIFICATION

7-16 SPARES AND REPAIR PARTS QUALIFICATION

7-16.1 BUILD TO PRINT

7-16.2 SPECIFICATION CONTROL

7-16.3 SOURCE CONTROL

CHAPTER 8 - SUBSYSTEM QUALIFICATION

8-1 INTRODUCTION

8-2 ENGINE, TRANSMISSION AND DRIVE SUBSYSTEM
QUALIFICATION

8-2.1 ENGINE PERFORMANCE

8-2.2 TRANSMISSION AND DRIVE PERFORMANCE

8-2.3 ENGINE, TRANSMISSION AND DRIVE VIBRATION
DETERMINATION

8-2.4 ENGINE, TRANSMISSION AND DRIVE ENDURANCE

8-2.5 AUXILIARY POWER UNIT

- 8-2.6 FIRE DETECTION AND EXTINGUISHING
- 8-3 FUEL SUBSYSTEM QUALIFICATION
 - 8-3.1 FUEL CAPACITIES
 - 8-3.2 REFUELING AND DEFUELING
 - 8-3.3 SLOSH AND VIBRATION
 - 8-3.4 FUEL SUPPLY AND FUEL TRANSFER
 - 8-3.5 AUXILIARY POWER UNIT
 - 8-3.6 INERTING SYSTEMS
 - 8-3.7 AERIAL REFUEL
 - 8-3.8 EXPLOSION PROTECTION
 - 8-3.9 AUXILIARY FUEL
- 8-4 ROTOR, PROPELLER AND PROPROTOR SUBSYSTEM QUALIFICATION
 - 8-4.1 WHIRL TESTING
 - 8-4.2 AEROELASTIC STABILITY AND FLUTTER
 - 8-4.3 LIFT AND THRUST PERFORMANCE
 - 8-4.4 ANTI-TORQUE SUBSYSTEM
 - 8-4.4.1 OPEN TAIL ROTOR
 - 8-4.4.2 DUCTED TAIL ROTOR
- 8-5 HYDRAULIC AND PNEUMATIC SUBSYSTEM QUALIFICATION
 - 8-5.1 HYDRAULIC SUBSYSTEM DEMONSTRATION
 - 8-5.2 PNEUMATIC SUBSYSTEM DEMONSTRATION
 - 8-5.3 CABIN PRESSURIZATION
- 8-6 LANDING GEAR QUALIFICATION
 - 8-6.1 DROP TESTING
 - 8-6.2 LOW AND HIGH SPEED TESTING
 - 8-6.3 BRAKING AND BRAKE LOCK TESTING
 - 8-6.4 FLOATATION TESTING
 - 8-6.5 SKI TESTING
 - 8-6.6 RETRACTION AND EXTENSION TESTING
- 8-7 ELECTRICAL SUBSYSTEM
 - 8-7.1 ELECTRICAL POWER TESTING
 - 8-7.2 ELECTRICAL POWER ANALYSIS
 - 8-7.3 ELECTRICAL AND ELECTRONICS COOLING
- 8-8 AVIONICS-COMMUNICATIONS
 - 8-8.1 EXTERNAL COMMUNICATIONS
 - 8-8.2 INTERNAL COMMUNICATIONS
- 8-9 AVIONICS-NAVIGATION
 - 8-9.1 INERTIAL NAVIGATION SYSTEMS
 - 8-9.2 DOPPLER NAVIGATION SYSTEMS
 - 8-9.3 BROADCAST NAVIGATION SYSTEMS
 - 8-9.4 HYBRID NAVIGATION SYSTEMS
- 8-10 CREWSTATION DISPLAYS AND CONTROLS
 - 8-10.1 FLIGHT DISPLAYS
 - 8-10.2 FLIGHT CONTROLS

- 8-10.3 COCKPIT AND INSTRUMENT LIGHTING
- 8-10.4 ELECTRONIC NETWORKS
- 8-10.5 VOICE INTERACTIVE SUBSYSTEMS
- 8-10.6 MISSION EQUIPMENT PACKAGE COCKPIT
INTEGRATION
- 8-10.7 VISIBILITY
- 8-10.8 FLIGHT CREW VISIONICS
- 8-10.9 PROPULSION CONTROLS
- 8-11 CREWSTATION EQUIPMENT AND FURNISHINGS
- 8-11.1 AVIATION LIFE SUPPORT EQUIPMENT (ALSE)
- 8-11.1.1 OXYGEN SYSTEM
- 8-11.1.2 HELMETS
- 8-11.2 HUMAN FACTORS
- 8-11.3 CREWSTATION CRASHWORTHINESS
- 8-11.4 FLIGHT DATA RECORDER
- 8-11.5 ENVIRONMENTAL CONTROL
- B-11.6 TRANSPARENCY PROTECTION⁴
- 8-12 PASSENGER FURNISHINGS⁵
- 8-13 HOIST SUBSYSTEMS⁶
- 8-13.1 RESCUE HOIST⁶
- 8-13.2 CARGO HOIST⁷
- 8-14 CARGO PROVISIONS⁸
- 8-14.1 INTERNAL CARGO PROVISIONS⁸
- 8-14.2 EXTERNAL CARGO PROVISIONS¹
- 8-15 LAVATORIES AND GALLEYS²
- 8-16 TARGETING, ARMAMENT AND FIRE CONTROL
SUBSYSTEMS³
- 8-16.1 SENSORS⁵
- 8-16.2 TRACKERS⁶
- 8-16.3 RANGEFINDERS⁶
- 8-16.4 ARMAMENT⁷
- 8-16.5 FIRE CONTROL¹
- 8-16.6 SENSOR FUSION²
- 8-16.7 SUBSYSTEM COUNTERMEASURE RESISTANCE³
- 8-17 SPECIAL MISSION AND NEW SUBSYSTEMS⁴
- 8-17.1 ELECTRONIC/OPTICAL AREA SURVEILLANCE⁵
- 8-17.2 AERIAL DELIVERY SYSTEMS⁶
- 8-17.3 ADDITIONAL WEAPONS⁷
- 8-18 FAULT TOLERANT SYSTEMS⁸
- 8-19 SOFTWARE CONFIGURATION ITEMS AND EMBEDDED
SOFTWARE INTEGRATION⁹
- 8-19.1 SOFTWARE CONFIGURATION ITEMS⁰
- 8-19.1.1 SOFTWARE REQUIREMENTS SPECIFICATION²
- 8-19.1.2 SOFTWARE TEST DESCRIPTION²
- 8-19.1.3 SOFTWARE TEST REPORT³

- 8-19.2 EMBEDDED SOFTWARE INTEGRATION³
- 8-19.2.1 SOFTWARE - HARDWARE INTEGRATION⁴
- 8-19.2.2 INTEGRATION TEST REQUIREMENTS⁵
- 8-20 TEST-ANALYZE-FIX-TEST (TAFT)⁶

CHAPTER 9 - SYSTEM QUALIFICATION

- 9-1 INTRODUCTION
- 9-0 LIST OF SYMBOLS
- 9-2 STRUCTURAL INTEGRITY DEMONSTRATIONS
 - 9-2.1 STATIC TEST PROGRAM
 - 9-2.2 WATER TIGHTNESS
 - 9-2.3 WEIGHT AND BALANCE
 - 9-2.4 INFLIGHT LOADS
- 9-3 PROPULSION AND POWER DEMONSTRATIONS
 - 9-3.1 ENGINE/AIRFRAME COMPATIBILITY TESTS
 - 9-3.1.1 CONTROLS
 - 9-3.1.2 VIBRATION
 - 9-3.1.3 STARTING
 - 9-3.2 PROPULSION SYSTEM TEMPERATURE TESTS
 - 9-3.3 ENGINE AIR INDUCTION AND EXHAUST TESTS
 - 9-3.4 HIGH ALTITUDE CONDITIONS
 - 9-3.5 LUBRICATION
 - 9-3.6 FIRE DETECTION AND SUPPRESSION TESTS
 - 9-3.7 TIEDOWN TESTING
- 9-4 FLIGHT LOAD SURVEY
 - 9-4.1 MANEUVERS
 - 9-4.1.1 AIR-TO-GROUND SCOUT ATTACK
 - 9-4.1.2 CARGO/UTILITY
 - 9-4.1.3 NAP-OF-EARTH (NOE) FLIGHT
 - 9-4.1.4 AIR-TO-AIR COMBAT
 - 9-4.1.5 HIGH ALTITUDE SURVEILLANCE
 - 9-4.2 TEST TECHNIQUES AND CONDITIONS
 - 9-4.3 LOAD MEASUREMENT
 - 9-4.4 USAGE OF RESULTS
- 9-5 DYNAMIC STABILITY
 - 9-5.1 GROUND RESONANCE
 - 9-5.2 BLADE FLUTTER
 - 9-5.3 AEROELASTIC AND MECHANICAL STABILITY
 - 9-5.4 WING AND CONTROL SURFACE
- 9-5 AERODYNAMIC DEMONSTRATION
 - 9-5.1 FLIGHT PERFORMANCE TESTS
 - 9-5.1.1 COMMON
 - 9-5.1.2 FIXED WING
 - 9-5.1.3 ROTARY WING
 - 9-6.2 FLYING QUALITIES TESTS

- 9-6.2.1 COMMON
- 9-6.2.2 FIXED WING
- 9-6.2.3 ROTARY WING
- 9-6.3 TRANSITION FLIGHT QUALITIES TESTS
- 9-6.4 AUTOROTATION OR UNPOWERED GLIDE
 - 9-6.4.1 COMMON
 - 9-6.4.2 FIXED WING
 - 9-6.4.3 ROTARY WING
- 9-6.5 SPIN AND STALL CHARACTERISTICS
- 9-6.6 TAKEOFF
 - 9-6.6.1 COMMON
 - 9-6.6.2 FIXED WING
 - 9-6.6.3 ROTARY WING
- 9-6.7 LANDING
 - 9-6.7.1 COMMON
 - 9-6.7.2 FIXED WING
 - 9-6.7.3 ROTARY WING
- 9-6.8 HOVER
- 9-7 TOTAL SYSTEM VIBRATION TESTS
 - 9-7.1 GROUND VIBRATION TESTS¹
 - 9-7.2 FLIGHT VIBRATION TESTS⁴
- 9-8 ACOUSTIC NOISE TESTS⁷
 - 9-8.1 INTERNAL NOISE TESTS⁸
 - 9-8.2 EXTERNAL NOISE TESTS⁰
- 9-9 CLIMATIC LABORATORY TESTS³
- 9-10 ICING FLIGHT TESTS⁷
 - 9-10.1 CLEAR, DRY AIR FLIGHT⁹
 - 9-10.2 SIMULATED ICING FLIGHT⁰
 - 9-10.3 NATURAL ICING FLIGHT¹
- 9-11 ELECTROMAGNETIC ENVIRONMENTAL EFFECTS (E3)
 - 9-11.1 ELECTROMAGNETIC COMPATIBILITY⁴
 - 9-11.2 ELECTROMAGNETIC VULNERABILITY⁷
 - 9-11.3 LIGHTNING⁸
 - 9-11.3.1 DIRECT EFFECTS TESTING⁸
 - 9-11.3.2 INDIRECT EFFECTS TESTING⁹
 - 9-11.3.3 STREAMERING TESTING⁰
 - 9-11.4 STATIC ELECTRICITY TESTING⁰
 - 9-11.5 RADIATION HAZARDS (RADHAZ)⁰
 - 9-11.5.1 HERO TESTING¹
 - 9-11.5.2 HERP TESTING¹
 - 9-11.5.3 HERF TESTING²
 - 9-11.6 TEMPEST TESTING²
 - 9-11.7 ANTENNA COUPLING³
- 9-12 WEAPON SYSTEM EFFECTIVENESS TESTS⁴
 - 9-12.1 GROUND TARGETS⁰

9-12.2	AIR TARGETS	1
9-13	EXTERNAL STORES SEPARATION	3
9-14	SURVIVABILITY	8
9-14.1	BALLISTIC SURVIVABILITY	1
9-14.1.1	ARMOR	2
9-14.1.2	BALLISTIC TOLERANT STRUCTURE	3
9-14.1.3	POSITIONING AND SEPARATION OF SUBSYSTEMS	4
9-14.1.4	FUEL BALLISTIC PROTECTION	6
9-14.2	LASER SURVIVABILITY	6
9-14.2.1	OPTICAL COUNTERMEASURES	7
9-14.2.2	HIGH ENERGY LASERS	9
9-14.3	SIGNATURE CONTROL	9
9-14.3.1	INFRARED	0
9-14.3.2	RADAR CROSS SECTION (RCS) AND SIGNATURE	2
9-14.3.3	ELECTROMAGNETIC EMISSION	3
9-14.3.4	VISIBLE EMISSION	4
9-14.3.5	ACOUSTIC EMISSION	5
9-14.4	MANEUVERABILITY	8
9-14.5	AIRCRAFT SURVIVABILITY EQUIPMENT (ASE)	9
9-14.6	NUCLEAR, BIOLOGICAL, CHEMICAL (NBC)	1
9-14.7	DIRECT NUCLEAR EFFECTS	2
9-14.8	CRASHWORTHINESS	3
9-15	AVIONICS - CONTROLS	4
9-15.1	FLY-BY-WIRE/FLY-BY-LIGHT SYSTEMS	7
9-15.2	STABILITY AUGMENTATION SYSTEMS	9
9-15.3	AUTOPILOTS	0
9-15.4	ENGINE CONTROLS	2
9-15.5	INSTRUMENT LANDING SYSTEMS	4
9-15.6	UNMANNED AIR VEHICLE (UAV) SYSTEMS	7
9-16	TEST-ANALYZE-FIX-TEST	0

CHAPTER 10 OPERATIONAL READINESS QUALIFICATION

10-0	LIST OF SYMBOLS	
10-1	INTRODUCTION	
10-2	RELIABILITY	
10-2.1	RELIABILITY MEASURES	
10-2.2	FAILURE MODE, EFFECTS, AND CRITICALITY ANALYSIS (FMECA)	
10-2.3	SAMPLE DATA COLLECTION	
10-2.4	SCORING CONFERENCES	
10-2.5	RELIABILITY TESTING	
10-2.5.1	RELIABILITY GROWTH TEST (RGT)	
10-2.5.2	RELIABILITY QUALIFICATION TEST (RQT)	
10-2.5.3	SYSTEM ENDURANCE TESTS	
10-3	OPERATIONAL READINESS/AVAILABILITY	

10-4 MAINTAINABILITY

10-4.1 PHYSICAL TEARDOWN AND MAINTAINABILITY
DEMONSTRATION

10-4.2 TECHNICAL MANUAL VALIDATION

10-4.3 TESTABILITY

10-5 DURABILITY

10-6 WARRANTY

10-6.1 GENERAL PERFORMANCE WARRANTY

10-6.2 RELIABILITY IMPROVEMENT WARRANTY

10-7 TRAINING AND TRAINERS

10-7.1 TRAINING

10-7.2 SYNTHETIC FLIGHT TRAINERS
(FLIGHT SIMULATORS)

10-7.3 BUILT-IN TRAINER/TRAINING

10-7.4 INTELLIGENT TRAINERS

10-7.5 COMBAT EVALUATION TRAINERS

10-8 TRANSPORTABILITY

10-9 MANPRINT

10-9.1 MANPOWER

10-9.2 PERSONNEL

10-9.3 TRAINING

10-9.4 HUMAN FACTORS

10-9.5 SYSTEM SAFETY

10-9.6 HEALTH HAZARDS

10-9.7 SOLDIER SURVIVABILITY

10-10 LOGISTICS

10-11 BATTLE DAMAGE ASSESSMENT AND REPAIR (BDAR)

10-12 CORROSION PREVENTION AND CONTROL PROGRAM

10-13 STANDARDIZATION AND INTEROPERABILITY

10-13.1 STANDARDIZATION

10-13.2 INTEROPERABILITY

10-14 SHIP BASED OPERATION COMPATIBILITY

10-14.1 SHIP FACILITIES

10-14.2 DYNAMIC INTERFACE

10-15 GROUND SUPPORT EQUIPMENT

10-15.1 SPECIAL TOOLS AND TEST EQUIPMENT

10-15.2 BORESIGHT EQUIPMENT

10-15.3 GROUND POWER UNITS

10-15.4 AUTOMATIC TEST EQUIPMENT (ATE)

10-16 TIE DOWNS AND MOORINGS

CHAPTER 11 - GOVERNMENT TESTING

11.0 LIST OF SYMBOLS

11-1 INTRODUCTION

11-2 TEST AND EVALUATION MASTER PLAN (TEMP)

- 11-2.1 TEST INTEGRATION WORKING GROUP (TIWG)
- 11-2.2 TECHNOLOGY FLIGHT EVALUATIONS (TFE)
- 11-2.3 FLIGHT SIMULATION EVALUATIONS (FSE)
- 11-2.4 CONTRACTOR DEVELOPMENT, SPECIFICATION
COMPLIANCE, AND QUALIFICATION TESTS
- 11-2.5 ARMY EXPERIMENTAL FLIGHT TESTS
- 11-2.6 PRELIMINARY AIRWORTHINESS EVALUATION (PAE)
- 11-2.7 ENDURANCE TEST
- 11-2.8 AIRWORTHINESS AND FLIGHT CHARACTERISTICS
(A&FC) TEST
- 11-2.9 CLIMATIC TESTS
- 11-2.10 SURVIVABILITY TESTS³
- 11-2.11 OPERATIONAL TESTS (OT)
- 11-2.12 FOLLOW-ON EVALUATIONS (FOE)
- 11-2.13 SOFTWARE TEST AND EVALUATION
- 11-3 PRELIMINARY AIRWORTHINESS EVALUATION (PAE)
- 11-3.1 PAE PREREQUISITE
- 11-3.2 FUNCTIONAL TESTS
- 11-3.3 HANDLING QUALITIES
- 11-3.4 NOVEL CONTROL SYSTEM EVALUATION
- 11-3.5 TRANSITION FLIGHT
- 11-3.6 PERFORMANCE
- 11-3.7 SUBSEQUENT PAE
- 11-3.8 PAE REPORTS
- 11-4 AIRWORTHINESS AND FLIGHT CHARACTERISTICS
(A&FC) TEST
- 11-4.1 OBJECTIVE
- 11-4.2 FLIGHT PERFORMANCE
- 11-4.3 VIBRATION SURVEYS
- 11-4.4 STATIC LONGITUDINAL STABILITY
- 11-4.5 DYNAMIC LONGITUDINAL STABILITY
- 11-4.6 MANEUVERING STABILITY
- 11-4.7 STATIC LATERAL-DIRECTIONAL STABILITY
- 11-4.8 DYNAMIC LATERAL-DIRECTIONAL STABILITY
- 11-4.9 TRANSITION FLIGHT
- 11-4.10 CONTROLLABILITY
- 11-4.11 NOVEL CONTROL SYSTEMS
- 11-4.12 AIRWORTHINESS AND FLIGHT CHARACTERISTICS
REPORT
- 11-5 CLIMATIC TESTS
- 11-6 SURVIVABILITY TESTS
- 11-6.1 LIVE FIRE
- 11-6.2 CRASHWORTHINESS
- 11-6.3 SPECIAL ELECTROMAGNETIC INTERFERENCE (SEMI)
- 11-6.4 ELECTRONIC WARFARE

- 11-7 ELECTROMAGNETIC ENVIRONMENTAL EFFECTS
- 11-8 DEVELOPMENTAL TESTS (DT)
- 11-9 OPERATIONAL TESTS (OT)
 - 11-9.1 ISSUES AND OBJECTIVES
 - 11-9.2 RESOURCES AND TEST CONDUCT
 - 11-9.3 REPORTS
- 11-10 FOLLOW-ON EVALUATIONS (FOE)
 - 11-10.1 ISSUES AND OBJECTIVES
 - 11-10.2 RESOURCES AND TEST CONDUCT
 - 11-10.3 REPORTS
- 11-11 GOVERNMENT SOFTWARE TEST AND EVALUATION (T&E)
 - 11-11.1 INTEGRATED PRODUCT TEAM (IPT)-SOFTWARE
 - 11-11.2 CONTRACTOR SOFTWARE QUALIFICATION TESTS
 - 11-11.3 GOVERNMENT WITNESS OF SOFTWARE VALIDATION
 - 11-11.4 GOVERNMENT SOFTWARE QUALIFICATION
 - 11-11.5 LIFE CYCLE SOFTWARE SUPPORT (LCSS) TESTS
- 11-12 SYSTEM CALIBRATIONS

APPENDIX A

THE ELEMENTS OF AN AIRWORTHINESS QUALIFICATION PLAN (AQP)

- A-1 INTRODUCTION
- A-2 AQP CONTENTS
 - A-2.1 SCOPE
 - A-2.2 REFERENCES
 - A-2.3 TEST ACCOMPLISHMENT
 - A-2.3.1 TEST SPECIFICATION
 - A-2.3.2 TEST ARTICLE AND AVAILABILITY
 - A-2.3.3 TEST FACILITIES
 - A-2.3.4 TEST EQUIPMENT
 - A-2.4 TEST MANAGEMENT
 - A-2.5 DOCUMENT GENERATION

APPENDIX B

THE ELEMENTS OF AN AIRWORTHINESS QUALIFICATION SPECIFICATION (AQS) AND THEIR CONTENTS

- B-1 INTRODUCTION
- B-2 OBJECTIVES OF THE MAJOR ELEMENTS
- B-3 MAJOR AQS ELEMENTS
 - B-3.1 SCOPE
 - B-3.1.1 SYSTEM SAFETY
 - B-3.2 APPLICABLE DOCUMENTS
 - B-3.3 DEFINITIONS
 - B-3.4 GENERAL REQUIREMENTS
 - B-3.4.1 TECHNICAL REVIEWS

B-3.4.2 DATA AND DOCUMENTATION

B-3.4.3 QUALIFICATION ASSURANCE

B-3.5 DETAIL REQUIREMENTS

B-3.5.1 MODELING

B-3.5.2 COMPONENT TESTS

B-3.5.3 SUBSYSTEM QUALIFICATION

B-3.5.4 SYSTEM QUALIFICATION

B-3.5.5 FLIGHT SAFETY PARTS QUALIFICATION

B-3.5.6 OPERATIONAL READINESS QUALIFICATION

B-3.5.7 PREPARATION FOR GOVERNMENT TEST

B-3.6 GUIDANCE INFORMATION

B-3.6.1 TEST INTEGRATION WORKING GROUP (TIWG)

B-3.6.2 COMPUTER RESOURCES WORKING GROUP (CRWG)

B-3.6.3 GOVERNMENT TESTING

B-3.6.4 USE OF GOVERNMENT TEST FACILITIES

APPENDIX C

ELEMENTS OF A CONTRACTOR FLIGHT RELEASE (CFR)

C-1 INTRODUCTION

C-2 CONTENTS

C-2.1 ADMINISTRATIVE INFORMATION

C-2.1.1 SUBJECT/SCOPE

C-2.1.4 TERMINATION

C-2.2 MAJOR ELEMENTS

C-2.2.1 REFERENCES

C-2.2.2 REVISIONS

C-2.2.3 CONFIGURATION

C-2.2.4 OPERATING INSTRUCTIONS, PROCEDURES,
LIMITATIONS, AND RESTRICTIONS

C-2.2.4.1 OPERATING INSTRUCTIONS

C-2.2.4.2 PROCEDURES

C-2.2.4.3 LIMITATIONS

C-2.2.4.4 RESTRICTIONS

C-2.2.5 MAINTENANCE PROCEDURES, INSPECTIONS,
AND FREQUENCY OF INSPECTION

C-2.2.5.1 MAINTENANCE PROCEDURES

C-2.2.5.2 INSPECTIONS

C-2.2.5.3 FREQUENCY OF INSPECTION

C-2.2.6 APPENDICES

APPENDIX D

ELEMENTS OF AN AIRWORTHINESS RELEASE (AWR)

D-1 INTRODUCTION

D-1 INTRODUCTION

D-2 CONTENTS

D-2.1 ADMINISTRATIVE INFORMATION

D-2.1.1 REVISION AND DATE

D-2.1.2 ADDRESSEE

D-2.1.3 SUBJECT

D-2.2 MAJOR ELEMENTS

D-2.2.1 REFERENCES

D-2.2.2 PURPOSE

D-2.2.3 CONFIGURATION

D-2.2.4 OPERATING INSTRUCTIONS, PROCEDURES,
LIMITATIONS AND RESTRICTIONS

D-2.2.4.1 OPERATING INSTRUCTIONS

D-2.2.4.2 PROCEDURES

D-2.2.4.3 LIMITATIONS

D-2.2.4.4 RESTRICTIONS

D-2.2.5 MAINTENANCE PROCEDURES, INSPECTIONS AND
FREQUENCY OF INSPECTION

D-2.2.5.1 MAINTENANCE PROCEDURES

D-2.2.5.2 INSPECTIONS

D-2.2.5.3 FREQUENCY OF INSPECTION

D-2.2.5.4 PARTS AVAILABILITY

D-2.2.5.5 WEIGHING

D-2.2.5.6 DESIGNATION PREFIX ASSIGNMENT

D-2.2.6 AIRCRAFT LOGBOOK ENTRIES

D-2.2.7 TERMINATION OF RELEASE

D-2.2.8 SIGNATURE OF ISSUE AUTHORITY

D-2.2.9 APPENDICES

APPENDIX E

ELEMENTS OF A STATEMENT OF AIRWORTHINESS
QUALIFICATION (SAQ)

E-1 INTRODUCTION

E-2 CONTENTS

E-2.1 ADMINISTRATIVE INFORMATION

E-2.1.1 EFFECTIVE DATE

E-2.1.2 ADDRESSEE

E-2.1.3 SUBJECT

E-2.2 MAJOR ELEMENTS

E-2.2.1 REFERENCES

E-2.2.2 PURPOSE

E-2.2.3 CONFIGURATION

E-2.2.4 AIRWORTHY OPERATION

E-2.2.4.1 OPERATING INSTRUCTIONS AND PROCEDURES

E-2.2.4.2 LIMITATIONS AND RESTRICTIONS

E-2.2.5 SUSTAINING AIRWORTHINESS

E-2.2.5.1 INSPECTIONS AND FREQUENCY OF INSPECTION

E-2.2.5.2 LIMITED LIFE AND FLIGHT SAFETY PARTS

E-2.2.5.3 MAINTENANCE PROCEDURES

E-2.2.6 AIRCRAFT LOGBOOK ENTRIES

E-2.2.7 SIGNATURE OF ISSUE AUTHORITY

E-2.2.8 APPENDICES

APPENDIX F

ELEMENTS OF AN AIRWORTHINESS QUALIFICATION SUBSTANTIATION REPORT (AQSR)

F-1 INTRODUCTION

F-2 CONTENTS

F-2.1 ELEMENTS OF: VOLUME I - AIRWORTHINESS
QUALIFICATION FINAL REPORT

F-2.1.1 INTRODUCTION

F-2.1.1.1 PURPOSE

F-2.1.1.2 APPLICABLE CONTRACTS

F-2.1.1.3 EXECUTIVE SUMMARY

F-2.1.1.4 STATEMENT OF AIRWORTHINESS QUALIFICATION F-4

F-2.1.2 DEFINITIONS

F-2.1.3 AIRCRAFT DESCRIPTION

F-2.1.4 AIRWORTHINESS QUALIFICATION PROGRAM

F-2.1.4.1 PROGRAM SCHEDULE

F-2.1.4.2 TEST PROGRAM SUMMARY

F-2.1.5 STRUCTURAL DEMONSTRATION SUMMARY

F-2.1.5.1 DESIGN FLIGHT CONDITIONS

F-2.1.5.2 DESIGN GROUND CONDITIONS

F-2.1.5.3 DESIGN CRASH CONDITIONS

F-2.1.5.4 STRENGTH SUMMARY

F-2.1.6 COMPONENT LIVES

F-2.1.7 OPERATING RESTRICTIONS

F-2.1.8 QUALIFICATION DATA SUMMARY AND INDEX

F-2.1.8.1 CONTRACTOR DATA

F-2.1.8.2 GOVERNMENT DATA

F-2.2 ELEMENTS OF: VOLUME II - SPECIFICATION
COMPLIANCE BY PARAGRAPH

F-2.2.1 INTRODUCTION

F-2.2.2 PARAGRAPH COMPLIANCE LIST